ISOBUS VT

ISOBUS Virtual Terminal

User Manual

HY33-4010-IB/UK

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1. Introduction

A virtual terminal (VT) is an electronic control unit (ECU), consisting of a graphical display, connected to an ISO 11783 network that provides the capability for an ECU implement to interact with operator. When Working Set (WS) detects the VT in ISOBUS network, it can send an ObjectPool[1] to the VT or download the saved pool from VT's non-volatile memory. If the WS is active on the VT screen, all soft key and editing button presses are sent to the WS. The WS can modify its own pool at the VT at any time.

Parker's ISOBUS-VT is designed for vehicle use only, and indoor use with high temperature range. Certification of the Parker's ISOBUS-VT guarantees that it is compliant with other ISOBUS products on the market.

[1] ObjectPool is a group of objects that describes user interface seen on the VT screen.

1.1. Keys and display areas

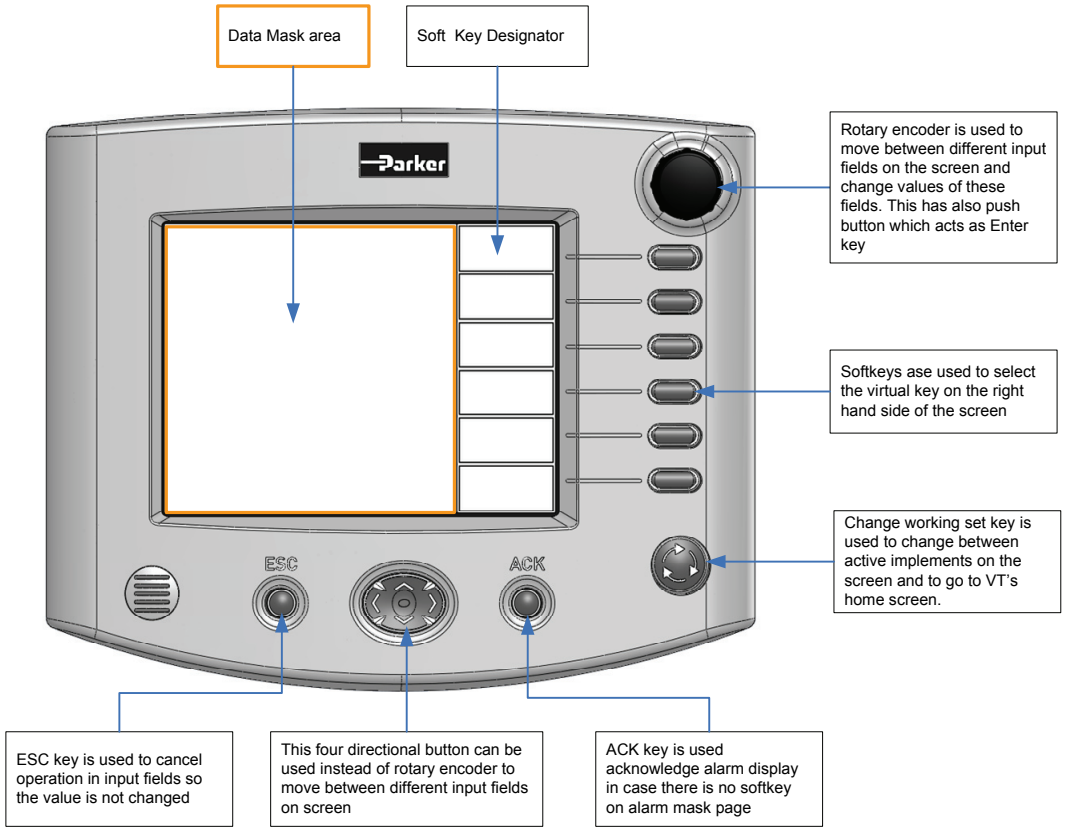

Data Mask area
Soft Key Designator
Rotary encoder is used to move between different input fields on the screen and change values of these fields. This has also push button which acts as Enter key
Softkeys ase used to select the virtual key on the right hand side of the screen
Change working set key is used to change between active implements on the screen and to go to VT's home screen.
ESC
ACK
ESC key is used to cancel operation in input fields so the value is not changed
This four directional button can be used instead of rotary encoder to move between different input fields on screen
ACK key is used acknowledge alarm display in case there is no softkey on alarm mask page

Figure 1: Keys and display areas

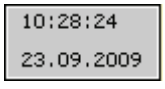
2. Basic Masks

2.1. Main Mask

Main mask is the first visible mask after start up.

Figure 2: Main mask

Soft Keys

1. To Settings Mask
2. To Information Mask
3. To Date time Mask
4. To Files Mask
5. To Auxiliary Mask
6.  No action. Shows date & time

2.2. Settings Mask

Setting mask contains controls to change display, audio settings and information that are sent to ECU (Electronic Control Unit) on request. To change values on mask see section 3.

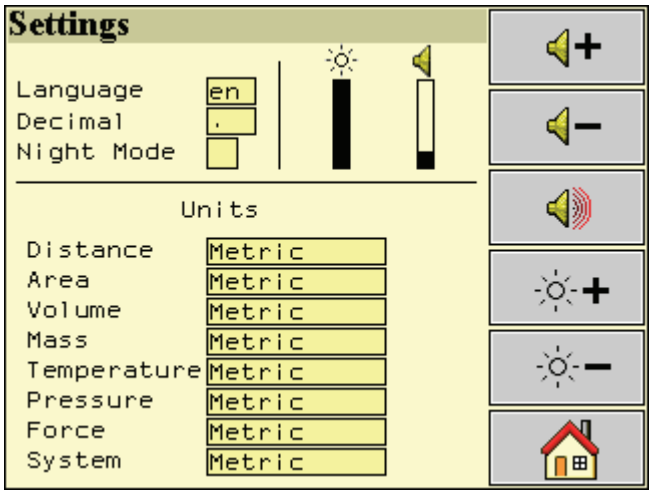


Figure 3: Main mask

Soft Keys

1. Increase volume
2. Decrease volume
3. Volume test
4. Increase brightness
5. Decrease brightness
6. Back to main mask

Units with possible values

Language

- en (this list changes according to connected devices)

Decimal

- (point or comma)

Night Mode

- (inverts display)

Distance

- Metric
- Imperial

Area

- Metric
- Imperial

Volume

- Metric
- Imperial
- US

Mass

- Metric
- Imperial
- Tons/pounds

Temperature

- Metric
- Imperial

Pressure

- Metric
- Imperial

Force

- Metric
- Imperial

System

- Metric
- Imperial
- US

2.3. Information Mask

Information mask contains information about VT (Virtual Terminal).

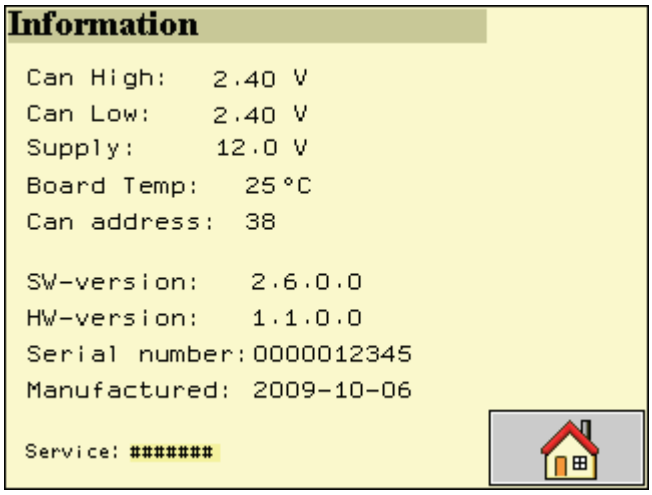


Figure 4: Information mask

Variable data

- Can High (2.25V – 2.75V)
- Can Low (2.25V – 2.75V)
- Supply Voltage
- Board temperature (-30°C - 80°C)
- Can address (38 default)

Static data

- SW-version
- HW-version
- Serial number
- Manufactured

Service code

- (input field for service code)

Soft Keys

Back to main mask

2.4. DateTime Mask

DateTime has input fields to change date, time and time format.

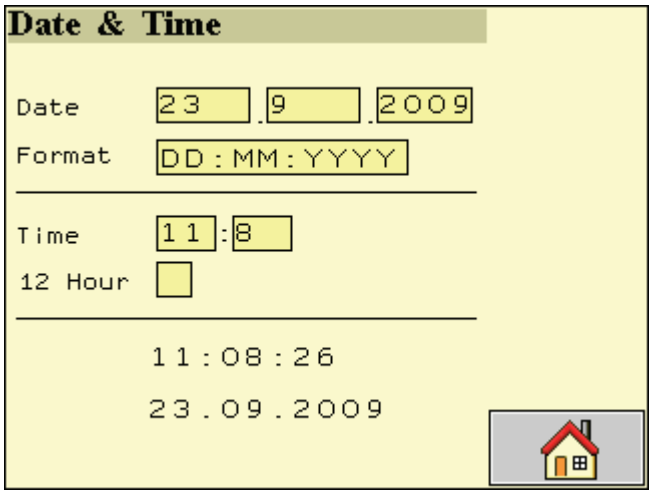


Figure 5: DateTime

Date

- Number input fields for date according to Format

Format

- DD:MM:YYYY (day:month:year)
- DD:YYYY:MM
- MM:YYYY:DD
- MM:DD:YYYY
- YYYY:MM:DD
- YYYY:DD:MM

Time

- <Hour>:<Minute>

12 Hour

Soft Keys

Back to main mask

2.5. Files Mask

Virtual terminal can save pools into VT's non-volatile memory. Also auxiliary mappings can be stored. Use rotary to select file.

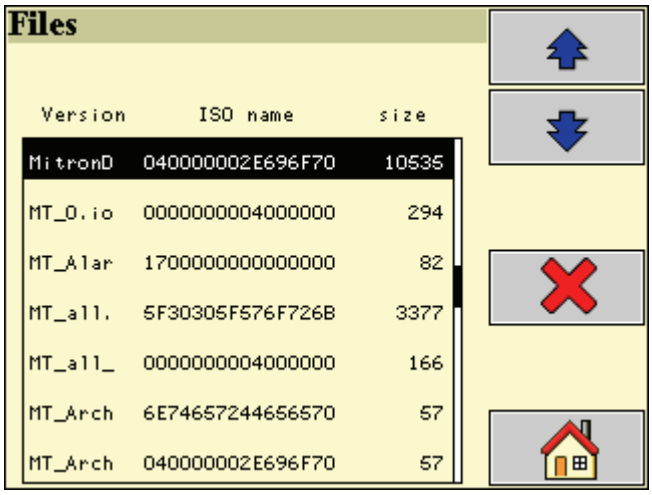


Figure 6: Files mask

Soft Keys

1. Scrolls one file list page up
2. Scrolls one file list page down
3. (none)
4. Delete selected file from non volatile memory.
5. (none)
6. Back to main mask

2.6. Auxiliary Mask Aux

Auxiliary mask contains editor to map input to function

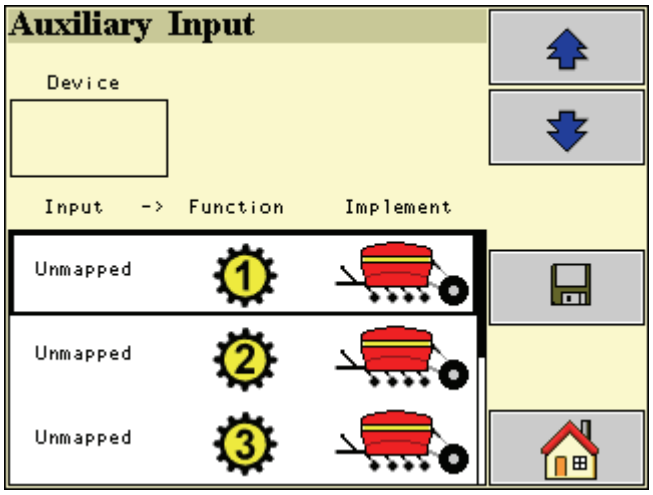


Figure 7: Auxiliary mask

Soft Keys

1. Scroll page up
2. Scroll page down
3. (none)
4. Save mapping configuration.
5. (none)
6. Back to main mask

Usage

1. Use rotary to select wanted function
2. Press enter to focus input
3. Select with rotary wanted input.
4. Press enter to validate selection. Now VT tries to connect input to function. If this fails VT shows alarm mask.
5. Save configuration

3. How to change values

ISO 11783-6 standard has four different kind of input fields for user. Field types are Boolean, List, Number, String. These fields can be selected with rotary if they are enabled. ESC key aborts editing at any time.

3.1. Input Boolean field

This field has been implemented as square box. Enter key chances value.

Examples:

- ☐ Enabled, false
- ☒ Enabled, true
- ☒ Disabled, true

3.2. Input List field

Input list field is invisible container that can contain objects. To change value of the input list field object, press enter when the object is selected. Now the object is framed. Use rotary to change new value. Press enter to accept new value.

Examples:

- Parker VT Selected
- Parker VT Active
- Parker VT Disabled

3.3. Number input

There are two ways to change number input values.

3.3.1. Edit

Press enter when the object is selected. The object will become framed and active. Use rotary to increase or decrease the value. You can use also +/- keys. Press enter to accept value.

Examples:

- Active
- Disabled

3.3.2. Number editor

When you double click with enter key selected number input field, the VT opens number editor mask.

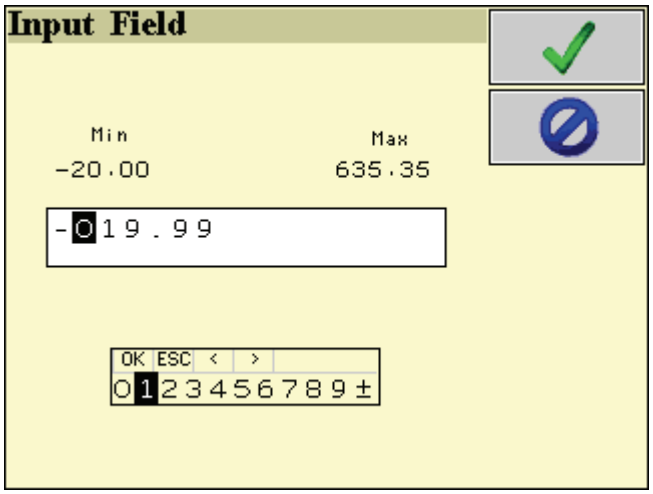


Figure 8: Number editor mask

Soft Keys

1. Accept new value
2. Cancel

Mask Objects

- **Min** (Displays minimum possible input value).
- **Max** (Displays maximum possible input value).
- **OK** (Accept value)
- **ESC** (Cancel)
- **<** (Editor cursor step backward)
- **>** (Editor cursor step forward)
- **1-9** and ± (Editor keyboard)

Usage

Use editor keyboard with rotary and enter to input value. If value is invalid VT will show alarm mask.

3.4. String input

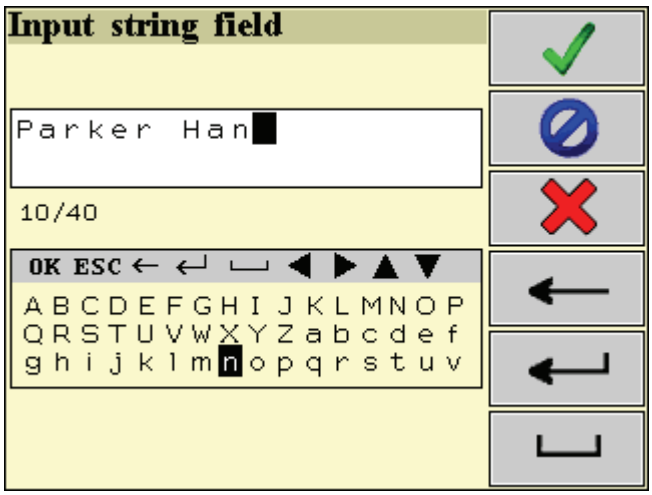


Figure 9: String editor

Soft Keys

1. Accept new string (string in edit field)
2. Cancel
3. Clear edit text field
4. Backspace
5. Newline
6. Space

Edit buttons in string keyboard

- OK Accept new value
- ESC Cancel editing
- ← Backspace
- ↵ New line
- ␣ Space
- ◀ Editor cursor step backward
- ▶ Editor cursor step forward
- ▲ Line step up

- Line step down

Usage

Use editor keyboard with rotary and enter to input value.

4. Information notes

VT informs user with message boxes. The box is seen the lower left of the screen certain time even mask or working set is changed.

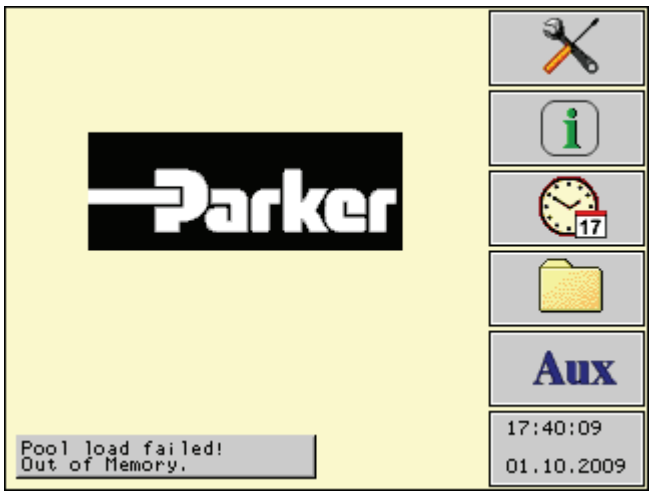


Figure 10: Message box

5. Alarms

Alarm Mask informs operator about problems or failures in the workingset. Operator must acknowledge this message with available softkeys or by ACK button. If Alarmask is on the screen it is not possible to change workingset with change workingset button.

5.1. Alarms that can occur in system pool

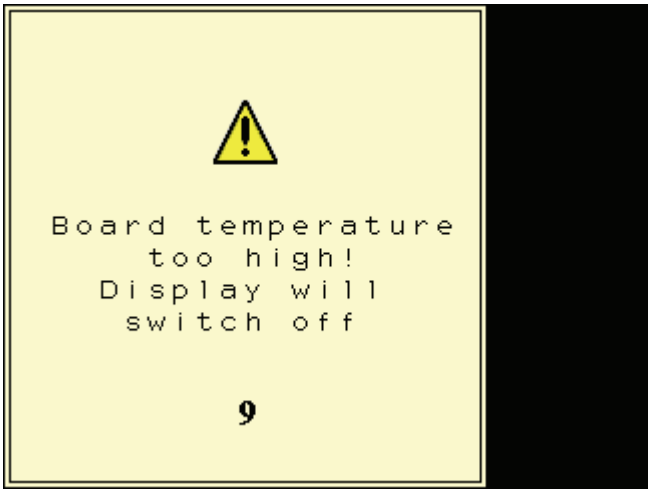


Figure 11: Board temperature alarm mask

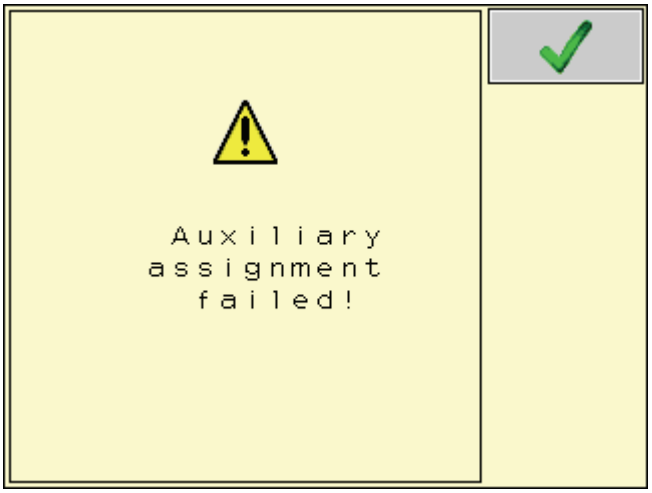


Figure 12: Auxiliary assignment error mask

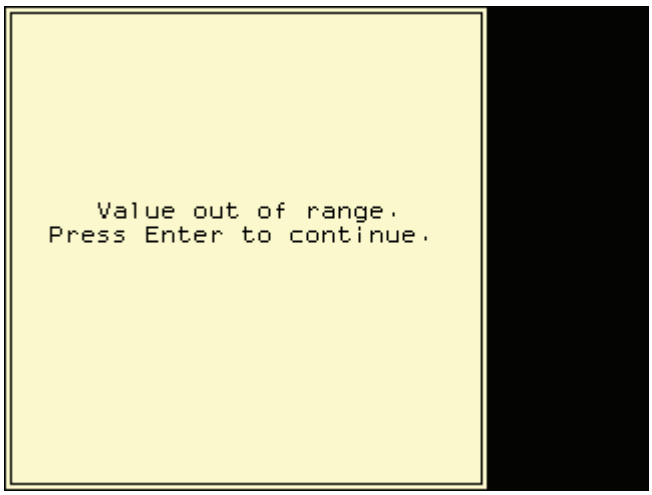


Figure 13: Number Edit error mask

6. Splash screen

6.1. Parker Splash screen

Splash screen is the first visible picture after start up, and is shown for 3 seconds.

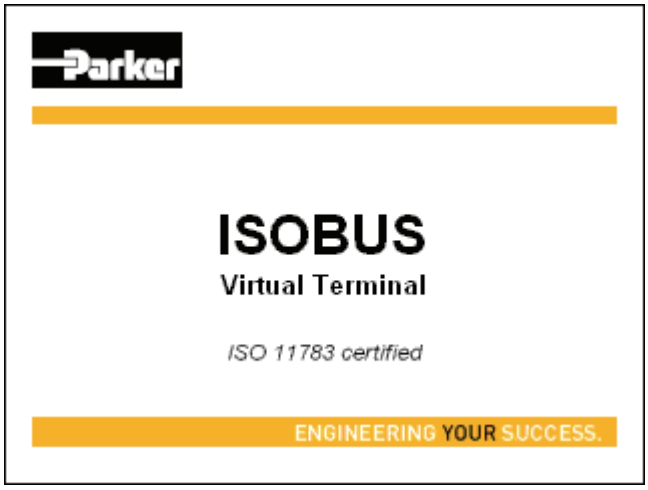


Figure 14: Splash screen